

ABSTRACT

The present invention relates to an uninterruptible power supply, more specifically, to an uninterruptible power supply for the backup of AC-power supply which comprises an electric double layer capacitor as an energy storage device. The uninterruptible power supply according to the present invention comprises an AC power source, a AC/DC converter which converts an AC input from the AC power source into an DC power, an energy storage device which stores an extra electric energy and a DC/AC inverter which converts DC input from the energy storage device into AC power and supplies the AC power to an output load at a power interruption, wherein the energy storage device is an electric double layer capacitor and a ratio of charging voltage of the electric double layer capacitor to a minimum operating voltage of the DC/AC inverter is adjusted to 1.3 times or higher. The uninterruptible power supply has highly enhanced energy efficiency and power backup time, compared even to the conventional DC power backup system such that efficient power backup can be achieved.